

ARGUMENTS

The Examiner has rejected all pending claims as being anticipated by Wells (WO 97/08898). This rejection is respectfully traversed.

It is respectfully considered that the subject matter disclosed in Wells is fundamentally different from the claimed subject matter, and it is considered useful, before responding to the Examiner's detailed remarks, first to contrast the two different teachings.

Certain claimed embodiments concern the manipulation of a compressed transport stream containing a number of packets of data. A transport stream will typically comprise a plurality of individual, elementary streams contained in a packet structure. Different packets of data typically correspond to different elementary streams within the transport stream. Certain claims are directed to a method or apparatus, which can, by receiving a transport stream at a reference input, provide a compressed bitstream, which is aligned with that transport stream at the packet level.

The subject matter of Wells concerns switching between bitstreams, but these are elementary bitstreams, as opposed to transport bitstreams. The elementary bitstreams of Wells are not packetized. This is stated on page 18, lines 22 to 26 of Wells.

This key difference is highlighted when considering in more detail the encoder used in certain embodiments, and the encoder described in the Wells reference.

Certain embodiments employ a compression unit, which receives a data input and acts to produce a compressed bitstream in packets. The unit also receives a compressed transport stream having a sequence of transport packets as a reference input. This transport-stream-reference input forces the compression unit to output its packets in alignment with the reference packets of the reference input. A new transport stream can, therefore, be produced, with packets inserted in the correct alignment by the compression unit, the remainder of the transport stream (if present) being undisturbed.

The encoder described in Wells is used in a conventional sense. It outputs data as a compressed stream, and not in packets. Furthermore, it does not receive a transport stream having a sequence of packets as a reference input, as claimed.

It is therefore considered that independent claims 1, 9, 17, 25 and 32 are novel and non-obvious in view of the cited prior art.

The Examiner's detailed remarks will now be considered.

In response to paragraphs 1 to 3, appropriate corrections have been made to the specification, including the insertion of an abstract as a separate sheet. Claims 1, 4, and

32 have been amended in response to the claim objections set out in paragraph 5 of the Office action.

The Examiner also objected to the drawings and indicated that "corrected drawing sheets are required in reply to the Office action to avoid abandonment" of the application. However, in light of the amendments made to the specification, Applicant submits that the objections to the drawings are moot and no corrections are required. Therefore, the Applicant is not submitting corrected drawings and requests that the objection be removed.

In his rejection of Claims 1-34, the Examiner has based his argument on Claims 25 and 32. It is considered however that the novelty and inventiveness of the present claims can be explained more clearly by first considering only those points which relate to the more basic aspects of the invention, as set out in Claims 1, 9, 17 and 25 for example. Points made by the Examiner concerning further features will be dealt with subsequently.

In paragraph 7, the Examiner considers, in relation to claims 25 and 32, that Wells discloses an apparatus/method for forming a multi-program transport stream, as figures 3-4, page 3, lines 26+ and page 4, lines 8+. It is respectfully submitted that these cited portions make no mention of any form of transport stream. These passages refer only to a bitstream. As explained above this bitstream is in fact an elementary bitstream.

The Examiner then considers the reference input of a compression unit according to the claims to be disclosed as network feed-to switch 30 of Figure 3 of Wells. This is neither a reference input, nor an input to a compression unit. Rather this is a direct video input to a simple switch.

The generation of a transport stream reference having sets of reference packets is considered by the Examiner to be disclosed as coder 38 of Wells. There is no mention whatsoever in Wells, of a transport stream or of reference packets in relation to coder 38. In fact, no mention is made of a transport stream, with or without reference packets, in connection with any coder of any embodiment described in Wells. This is because, as explained above, the switching arrangement described in Wells operates on a single elementary stream.

The Examiner continues to address the feature of each compression unit receiving the transport stream reference. The compression unit is considered by the Examiner to be shown in Figure 3, and the transport stream reference to be received is considered by the

Examiner to be represented by the network feed of Wells. These assertions are not consistent. The only compression unit shown in Figure 3 is coder 38. Coder 38 however does not receive the network feed, but a decoded version of the feed.

Next, the Examiner cites page 10, lines 23+ and page 12, lines 10+ as disclosing the feature of the compression unit being arranged to output packets in alignment with the reference packets associated with that compression unit. The cited passages make no mention of packets. These passages refer to the simple switching between elementary streams, which are in temporal alignment, and not packet based processing. Moreover, these passages refer to a switch output, and not the output of a compression unit.

As far as can be ascertained, Applicant has now addressed all of the points which represent the basis of the Examiner's rejection of Claims 1, 9, 17 and 25. For the above reasons it is respectfully considered that the cited art does not disclose a compression unit which receives a reference transport stream having a sequence of transport packets, and which outputs packets in alignment with reference packets of the transport stream. It is therefore considered that the subject matter of the claims is novel and non-obvious over the cited art.

Independent Claim 32 concerns the formation of a multi-program transport stream having a fixed overall bit rate, and refers to the instantaneous allocation of bit rate between the programs of that transport stream. In this respect, the Examiner considers that control of the instantaneous allocation of a bit rate amongst a transport stream is disclosed at page 16, lines 12+ of Wells. This passage in fact refers to the switching of an elementary bitstream and the need to take into account GOP structure for rate control of such a bitstream. This in no respect discloses rate control within a transport stream.

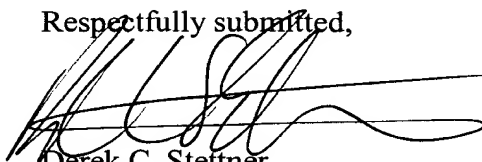
When referring to the feature of Claim 32 that relative occurrence of packets in the generated reference transport stream reflects the desired instantaneous allocation of a respective bit rate amongst the program transport streams, the Examiner has cited the operation of switch 30 of Figure 3 of Wells. Applicant respectfully submits that it is not sufficient simply to refer to the operation of a simple two pole switch as a disclosure of this feature.

For the reasons given above concerning the more general features, and also by virtue of the arguments concerning features relating to bit rates, it is considered that Claim 32 is novel and non-obvious over the cited art.

Features of the dependent claims will not be considered in detail. Dependent claims are considered novel and non-obvious at least by virtue of their dependency on the respective independent claim.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



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